

## L4(4.4) Applying Proportional Reasoning

EX. 1: Sean buys 8 DVDs for \$120.

Each DVD costs the same amount.

a) How much does 1 DVD cost?

b) How much do 13 DVDs cost?

$$a) \frac{120}{8} = 15$$

∴ 1 DVD is \$15

$$b) 15 \times 13 = 195$$

∴ 13 DVD STAN \$195

$$\frac{120}{8} = \frac{x}{1}$$

$$\frac{120}{8} = \frac{195}{13}$$

EX. 2: Ioana works for 4 days and earns \$224. At this rate:

a) How much does she earn in 1 day?

b) How much does she earn in 11 days?

$$a) \frac{224}{4} = \frac{x}{1}$$

$$56 = x$$

∴ Ioana earn \$56 in 1 day

$$b) \frac{224}{4} = \frac{x}{11}$$

$$\frac{224 \times 11}{4} = x$$

$$616 = x$$

$$x = 616$$

∴ she earns \$616 in 11 days

## Ex.3:

Zeljko purchased 4 cases of pop for \$26.

- a) How many cases could he buy for \$91? Explain.  
 b) How could you have solved the problem a different way?

$$a) \quad \frac{26}{4} = \frac{91}{x} \quad b)$$

$$\frac{4}{26} = \frac{x}{91}$$

$$\frac{4 \times 91}{26} = x$$

$$\frac{364}{26} = x$$

$$x = 14$$

∴ Zeljko can buy 14 cases with \$91.

## Ex.4:

Madurodam is a miniature city in the Netherlands.

Every object in the city is built to the same scale.

A lamppost in Madurodam is 12 cm tall.

It is modelled after an actual lamppost that is 3 m tall.

- a) A bridge that crosses the canal in Madurodam is 30 cm long. How long is the actual bridge that was used as the model?  
 b) A clock tower is to be built in Madurodam. It is modelled after a clock tower that is 25 m tall. How tall should the miniature tower be?  
 c) Explain how you solved each problem.



Assigned Work:  
 p129-130 # 3, 5, 6, 8

$$a) \quad \frac{\text{model}}{\text{actual}} \quad \frac{12}{300} = \frac{30}{x}$$

$$\frac{300}{.12} = \frac{x}{30}$$

$$\frac{300 \times 30}{12} = x$$

$$x = 750$$

∴ the bridge is actually 750cm long.